**Syllabus – CS5390**

California State University, Los Angeles

Department of Computer Science

**CS5390, Advanced Software Architecture, Fall 2020.**

**COURSE INFORMATION**

Instructor Information

**Instructor**: Jiang Guo

**Office Location**: ET A315

**Telephone**: (323) 343-6674 **Email**: jguo@calstatela.edu

**Office Hours:**

Monday: 5:40PM - 6:40PM

Wednesday: 5:40PM - 6:40PM

Friday 3:00PM - 4:00PM

Contact me to make Zoom appointments through **Canvas Email** or my S**chool Email**: jguo@calstatela.edu.

General Course Information

**Class Days/Time**: Fr 4:00PM - 6:45PM

**Prerequisites**: G2 standing or permission from instructor

Course Description

**University Catalog Description:**

This course is elective for CS MS program.

Design and development of large-scale software systems; integration of legacy systems; multiple architectural views, representation and documentation; software architecture styles; software architecture design; software quality attributes; software architecture evaluation.

Student Learning Objectives and Course Learning Objectives/Outcomes

At the end of the course, students are able to

* Familiar with concepts of software architecture design and analysis
* Familiar with software architecture styles
* Familiar with software architecture design
* Familiar with software architecture evaluation
* Familiar with software architecture design patterns

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

* Student will have the ability to use state-of-the-art patterns and frameworks to design, analyze, and assess software architectures.
* Students will understand modern software engineering concepts, techniques, practices, and tools, and will be able to apply them to the development of complex software systems.
* Students will have acquired advanced knowledge and skills in one or more specialized areas of computer science.
* Students will embrace lifelong learning and exhibit the knowledge, skills and attitude for adapting to new environments and technologies.

Course Objectives

Upon successful completion of this course, students will be able to:

* CLO1 design software architecture
* CLO2 evaluate software architecture

 Course Structure

This course is to be conducted online/hybrid. You will participate in the course using Cal State LA learning management system(s) [Canvas (Links to an external site.)](https://canvas.calstatela.edu/).

**REQUIRED COURSE MATERIALS**

Textbook

* [https://www.amazon.com/Unified-Modeling-Language-Addison-Wesley-Technology/dp/013485215X(Links to an external site.) (Links to an external site.)](https://www.amazon.com/Unified-Modeling-Language-Addison-Wesley-Technology/dp/013485215X)
* [https://www.amazon.com/Software-Development-Principles-Patterns-Practices/dp/0135974445(Links to an external site.) (Links to an external site.)](https://www.amazon.com/Software-Development-Principles-Patterns-Practices/dp/0135974445)
* [https://www.amazon.com/Head-First-Design-Patterns-Brain-Friendly/dp/0596007124 (Links to an external site.)](https://www.amazon.com/Head-First-Design-Patterns-Brain-Friendly/dp/0596007124)

Other equipment / material requirements

* Windows 10 or 7
* Zoom
* Adobe Reader
* Google Chrome
* MS PowerPoint
* Java JDK version 13
* Eclipse J2EE
* Apache Tomcat version 9
* MySQL version 5.7
* JDBC JConnector 5.7

Computer Requirements

PC Window machine (Laptop or Desktop): Windows 10 or 7

You will need to have an up-to-date browser, operating system and some additional software on your computer to take this class. Check the [ITS Helpdesk Student Resources page (Links to an external site.)](http://www.calstatela.edu/its/helpdesk/studentresources). Some of the documents in this course will be available to you in PDF form. You will need to download and install [Adobe Acrobat Reader software (Links to an external site.)](https://get.adobe.com/reader/) on your computer.

**COURSE POLICIES**

Students are expected to study all the slides, finish all the hands-on experience, take all the quiz, midterm and final exam.

**COURSE COMMUNICATION**

Interaction with Instructor

The Instructor will make every effort to communicate frequently with students through announcements and postings within Canvas.

Students can contact me to make Zoom appointments through **Canvas Email** or my S**chool Email**: jguo@calstatela.edu. Students will receive a reply within 48 hours.

Office Hours:

Monday:  5:40PM - 6:40PM

Wednesday: 5:40PM - 6:40PM

Friday 3:00PM - 4:00PM

As a student, you should expect to receive assignment feedback and responses to postings within 48 hours.

Questions

In online courses it is normal to have many questions about things that relate to the course, such as clarification about assignments, course materials, or assessments. Please post these in the course discussion part: **Q & A and Discussion**.

Netiquette

When posting on the discussion boards and chat rooms it is important to understand how to interact with one another online, ***netiquette***. You can read more about the rules of netiquette at [15 Rules of (Links to an external site.)  (Links to an external site.)Netiquette for Online Discussion Boards (Links to an external site.)](http://blogs.onlineeducation.touro.edu/15-rules-netiquette-online-discussion-boards/).

Virtual Office Hours

I will meet you at scheduled class time: Fr 4:00PM - 6:45PM. Twice a week I will be available for virtual office using ***Zoom Meeting***. Students can contact me to make Zoom meeting appointments through **Canvas Email** or my S**chool Email**: jguo@calstatela.edu. Students will receive a reply within 48 hours.

Monday:  5:40PM - 6:40PM

Wednesday: 5:40PM - 6:40PM

Friday 3:00PM - 4:00PM

 Turnaround/Feedback

During the week (M-F) I will check messages and monitor the **Q & A and Discussion**several times a day. If you have a concern and send me an email message, you can expect a response within two days.

**ASSIGNMENTS AND GRADING POLICY**

The following items make the total grade:

* Quiz (40%)
* Midterm Exam (30%)
* Final Exam (30%)

Grading Scale

|  |  |
| --- | --- |
| Letter Grade | Percentage |
| A | 90-100% |
| B | 80-89 % |
| C | 70-79 % |
| D | 60-69% |

To help understand how to read and access your grades on Canvas, explore this question: [https://community.canvaslms.com/docs/DOC-16532-4212829286 (Links to an external site.)](https://community.canvaslms.com/docs/DOC-16532-4212829286)

**HELPFUL STUDENT RESOURCES**

Technical Resources

Information on Cal State LA technical support resources for students: [Technical Support Resources (Links to an external site.)](http://www.calstatela.edu/cetl/technical-support-resources)

Student Support Resources

Information on Cal State LA student support resources for students: [Student Support Resources (Links to an external site.)](http://www.calstatela.edu/cetl/student-support-resources)

Academic Support Resources

Information on Cal State LA academic support resources for students: [Academic Support Resources (Links to an external site.)](http://calstatela.edu/cetl/academic-support-resources)

Center for Academic Success

The Center for Academic Success (CAS) supports all students throughout their educational journey. You are encouraged to visit a CAS tutor for STEM, social science, or writing tutoring early in the semester. The academic services CAS provides are inclusive, engaging, challenging, and impactful. CAS tutors offer a one-on-one opportunity to discuss your assignments and will provide you with tools to become an independent scholar. The appointments are 30 minutes long. Log on to the Student Success Collaborative portal [to make an appointment online (Links to an external site.)](http://www.calstatela.edu/undergraduatestudies/student-success-collaborative-ssc).

Canvas Student Support

Information for students on how to be a successful online student and how to use Canvas:

* [Canvas Student Guide (Links to an external site.)](https://community.canvaslms.com/docs/DOC-10701)

Glazer Family Dreamers Resource Center

The [Erika J. Glazer Family Dreamers Resource Center (Links to an external site.)](http://www.calstatela.edu/gfdrc) promotes the success of undocumented students and students from mixed-status families at Cal State LA through a variety of resources, services, and community engagement opportunities. Such programs and services are weekly immigration legal clinics, California Dream Act Application for Financial Aid Assistance, and professional and academic development workshops.

Campus Available Resources:

* **ITS Resources for Students:**
http://www.calstatela.edu/its/helpdesk/studentresources
* **ITS Helpdesk Information:**
[http://www.calstatela.edu/its/helpdesk(Links to an external site.) (Links to an external site.)](http://www.calstatela.edu/its/helpdesk)
* **Center for Academic Success (Tutoring and Writing Center):**
https://www.calstatela.edu/academic-success
* **Office of Students with Disabilities (OSD):**
http://www.calstatela.edu/osd
* **University Library:**
https://calstatela.libguides.com/libraryaccess
* **Student Advising Services:**
http://www.calstatela.edu/advising
* **Dean of Students Office:**
http://www.calstatela.edu/deanofstudents
* **Counseling and Psychological Services (CAPS):**
[http://www.calstatela.edu/studenthealthcenter/ca(Links to an external site.) (Links to an external site.)](http://www.calstatela.edu/studenthealthcenter/ca)ps
* **Student Health Services:**
http://www.calstatela.edu/studenthealthcenter
* **How do students view their grades on Canvas:**
* [https://community.canvaslms.com/docs/DOC-16532-4212829286(Links to an external site.) (Links to an external site.)](https://community.canvaslms.com/docs/DOC-16532-4212829286)
* **How to reply to a discussion forum in Canvas:**
* https://community.canvaslms.com/docs/DOC-10561-4212190706

**UNIVERSITY POLICIES**

Student Conduct

Information on student rights and responsibilities, standards of conduct, etc., can be found by visiting the Cal State LA [University Catalog Appendices (Links to an external site.)](http://ecatalog.calstatela.edu/content.php?catoid=26&navoid=2721).

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Students should be aware of the current deadlines and penalties for adding and dropping classes by visiting the [GET home page (Links to an external site.)](https://cmsweb.calstatela.edu/psp/CLAPRD/?cmd=login&languageCd=ENG&). (Registrar news and information)

Americans with Disabilities Act (ADA)

Reasonable accommodation will be provided to any student who is registered with the Office of Students with Disabilities and requests needed accommodation. For more information visit the [Office (Links to an external site.)  (Links to an external site.)for Students with Disabilities (Links to an external site.)](http://www.calstatela.edu/osd) home page.

Academic Honesty

Many incidents of plagiarism result from students’ lack of understanding about what constitutes plagiarism. However, you are expected to familiarize yourself with the [Cal State LA Academic Honesty Policy (Links to an external site.)](http://ecatalog.calstatela.edu/content.php?catoid=26&navoid=2646) including [Appendix D – Academic Honesty (Links to an external site.)](http://ecatalog.calstatela.edu/content.php?catoid=26&navoid=2646) and [Appendix E - Student Conduct / Student Conduct Procedures (Links to an external site.)](http://ecatalog.calstatela.edu/content.php?catoid=26&navoid=2647). All work you submit must be your own scholarly and creative efforts. Cal State LA plagiarism as follows: “At Cal State LA, plagiarism is defined as the act of using ideas, words, or work of another person or persons as if they were one’s own, without giving proper credit to the original sources.”]

**COURSE PACING GUIDE/SCHEDULE OF ASSIGNMENTS**

Students are expected to follow the Study Guide of each week and study all the materials, such as watch videos and slides. Also, students are expected to complete all the hands-on experience and participate the discussion and take a quiz bi-weekly.

All the weekly schedule is available in Canvas.